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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 March 2007*.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-48* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-48* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *12/18/2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set

forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this

application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the office action, dated

August 22, 2006, has been withdrawn pursuant to 37 CFR 1.114. Applicant's

submission filed on March 23, 2007 has been entered.

2.   The amendment filed on March 23, 2007 has been received and entered. Claims

1-48 are currently pending in this application. In the amendment filed on March 23,

2007, claims 1-32, 34-36, AND 42-26 were amended. Claims 47-48 are newly added.

Claims 1, 15, 28, 30, and 47 are independent claims.

Response to Arguments

3.   Applicant's arguments filed on March 23, 2007 have been considered but are

moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

6.   Claim 1-4, 8, 12-13, 15-18, 22, 26-27, 35-39, 42-43, and 44 are rejected under

35 U.S.C. 103(a) as being unpatentable over Woods (hereinafter "Woods") (U.S. Patent

Number 5724571) in view of Copperman et al. (hereinafter "Copperman") (U.S. Patent

Application Publication Number 2003/0115191).

As per claim 1, Woods is directed to a method and teaches the limitations:

"receiving a definition of a target rule for detection of target hits in an article""

(Wood, Column 4 Lines 47-38, i.e., *windows onto a target document – i.e., regions in a*

document ; Column 5 Lines 7-14, and Figure 2 and Column 4 Lines 6367, i.e., *Figure 2*

illustrates how the program modules may be organized to carry out the indexing and

analysis operations that are applied to the document corpus 70 of text materials to be

indexed in order to produce the term occurrences index 80 and the term/concept

relationship network 110 used to support subsequent query operations") "wherein the

target rule comprises:

"defining a target scope that that characterizes a document region to which the

target rule is to be applied" (Wood, Column 4 Lines 47-38, i.e., *windows onto a target*

document – i.e., regions in a document and Column 5 Lines 7-14);

"receiving a definition of an extraction rule that is based on the target rule,

wherein the extraction rule definition comprises an extraction scope characterizes a

document region to be extracted" (Wood, Column 4 Lines 47-38, i.e., *windows onto a*

target document – i.e., regions in a document ; Column 5 Lines 7-14, and Figure 2 and

Column 4 Lines 6367, i.e., *Figure 2 illustrates how the program modules may be*

organized to carry out the indexing and analysis operations that are applied to the

document corpus 70 of text materials to be indexed in order to produce the term

occurrences index 80 and the term/concept relationship network 110 used to support

subsequent query operations"; Column 5 Line 66 through Column 7 Line 57, i.e. *Basic*

Method: Ranking and Penalty Procedures, Procedure 1, Procedure 2, Procedure 2,

Procedure 3, Procedure 4, Procedure 5, Procedure 6, Procedure 7, Procedure 8,

Procedure 9, and so on);

"applying the target rule to document regions of the article characterized by the

target scope" (Wood, Column 4 Lines 47-38, i.e., *windows onto a target document – i.e.,*

regions in a document; and Column 4 Lines 38-47, i.e., *The hit passages, i.e. the*

regions of retrieved text that include term hits, are stored in a ranked order according to

the method of the invention, described below);

"determining a target score for the document regions of the article, wherein the

score represents how well the target rule is satisfied by the document regions" (Wood,

Column 4 Lines 47-38, i.e., *A proximity buffer 95 is also connected to the processor 20,*

*and is used by the processor to store positions and sizes **of "windows" onto a target***

***document--i.e., regions in a document**, of dynamically variable sizes, currently being*

searched by the processor for terms that match the input query terms. A window may

be specified as a starting location within a target document plus a size that determines

how much of the document, starting from that starting location, is to be included in a hit

*passage. **A hit passage is that portion of the document covered by such a***

window, and includes hit terms, i.e. the matching terms themselves ; Column 4

Lines 59-61, i.e., *The hit terms and **hit passages** are also stored in the proximity buffer*

95, correlated with the window information; Column 5 Lines 66 through Column 6 Lines

7, i.e., FIG. 4 corresponds to the twelve ranking and penalty procedures discussed

below. At box 410, a search query phrase (consisting of one to many terms) is input,

either entered by the user or requested by an executing process on the processor 20.

*Boxes 420-550 represent steps taken to penalize, **rank and display the retrieved***

passages from the document corpus and are related to ranking procedures 1-12

*listed below. The **numerals in circles in FIG. 4** indicate the correspondingly numbered*

ranking criteria; Also note the rest of Wood reference how these scores/ranking

numerals are calculated);

"applying the extraction rule to the article to determine an extract from the article,

wherein the application of the extraction rule is based on the determined target score"

(Woods, Column 5 Line 66 through Column 7 Line 57; Also note Figure 4 of Wood);

"outputting the extract" (Figure 4, i.e., *Display (store) actual hit passages (from*

documents) according to rank; highlight hit terms, providing hyperlinks to target text).

Woods dose not explicitly teach the limitation: "a concept list comprising an

original concept list comprising an origin concept, a relationship between the origin

concept and an evaluated term, and a distance representing a strength of the

relationship between the origin concept and the evaluated term".

On the other hand, Copperman teaches the limitation:

""a concept list comprising an original concept list comprising an origin concept, a

relationship between the origin concept and an evaluated term, and a distance

representing a strength of the relationship between the origin concept and the evaluated

term" (Copperman, Paragraph 0132, i.e., *As an illustrative example, suppose that*

*"TCP-IP" is offered as a related feature 835 in a user session where **the Symptom***

***concept node "can't connect"** and **the Object concept node "network"** have already*

been confirmed as relevant to the user query. In this example, the ranking of "TCP-IP"

with respect to other displayed related features 835 is based on how often previous

users selected the various related features when "can't connect" and "network" were

already confirmed as concept nodes deemed relevant to the user session. In one

implementation, each related feature, such as "TCP-IP", includes a list of confirmed

concept nodes with which it has been previously presented. Each such confirmed

*concept node includes **an weight** or **other indicator** including information about how*

*often **the particular related feature** was selected together with that particular*

*confirmed concept node. For example, **the related feature "TCP-IP" would include a***

weight for "can't connect" and "TCP-IP," another weight for "network" and "TCP-

IP", and similar weights for the other confirmed concept nodes with which the

***"TCP-IP" related feature 835 has previously been presented.** In this example, the*

ranking and/or display of the "TCP-IP" related feature 835 is based on such weights.

Further description of suitable use-based ranking techniques are described in the

above-incorporated Copperman et al. U.S. patent application Ser. No. 09/944,636; In

the above example, "can't connect" and "network" are origin concepts. TCP/IP is the

evaluated concept. Distance/weights between said concept nodes are illustrated Figure

2 of Copperman; Particularly note Paragraph 0037-0038, Figure 6, Paragraph 0061 of

Copperman which teaches how said weights/relationships/distances are derived);

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the skill to add the feature of using a concept list comprising an origin

concept, an evaluated term, and a relationship between the origin concept and the

evaluated term, as taught by Copperman, to the method of Woods, which extract

documents, so that the resultant method would comprise a target definition which

comprises at least one concept. One would have been motivated to do so in order to

classify documents according to the most pertinent concept or concepts (Copperman, Paragraph 0006).

As per claim 2, Woods teaches the limitation:

" wherein applying the target rule comprises detecting a plurality of target hits and applying the extraction rule comprises extracting a plurality of extracts" (Wood, Column 4, Lines 38-47).

As per claim 3, Woods is directed to the limitation:

"further comprising sorting the extracts based on the extraction rules" (Wood, Column 5 Line 66 through Column 7 Line 57).

As per claim 4, Woods discloses the limitation:

"further comprising selecting a first extract from the article for output based on the target score" (Wood, Column 5 Lines 66 through Column 6 Lines 7, FIG. 4, and Column 5 Line 66 through Column 7 Line 57).

As per claim 8, Wood in view of Copperman teaches the limitations: .

"wherein in target rule further comprises a concept set that comprises the concept list (Copperman, Paragraph 0132, i.e., *each related feature, such as "TCP-IP", includes a list of confirmed concept nodes with which it has been previously presented*) and a second concept" (In the method of Wood in view of Copperman, any concept as employed in Wood's method could be the second concept).

As per claim 12, Woods teaches the limitation:

"wherein the document region characterized by the target scope comprises an article, a sentence, or a term" (Wood, Column 4 Lines 48-62 and Column 7 Lines 13-25).

As per claim 13, Woods teaches the limitation:

"wherein the document region characterized by the extraction scope comprises an article, a sentence or a term" (Wood, Column 4 Lines 48-62 and Column 7 Lines 13-25).

Claims 15-18 are rejected on the same basis as claims 1-4 respectively.

Claim 22 is rejected on the same basis as claim 8.

Claim 26 is rejected on the same basis as claim 12.

Claim 27 is rejected on the same basis as claim 13.

As per claim 35, Wood teaches the limitation:

"wherein receiving the definition of the extraction rule further comprises receiving a definition of a sort order in which extracts are to be sorted for output" (Wood, Column 11 Lines 23-26, i.e., *after which all of the **hit passages** that have been found are **sorted** by their net overall penalty*; Wood, Column 13 Lines 26-30, i.e., *At box 530, the processor 20 fills the output buffer with the **sorted list of query hits**, in a procedure detailed in FIG. 5A and Section 2F below*).

Claim 36 is rejected on the same basis as claim 35.

As per claim 37 Wood in view of Copperman teaches the limitation:

"wherein the distance comprises a numeric representation of the strength of the

relationship between the origin concept and an evaluated concept" (Copperman,

Paragraph 0060, i.e., *Each node in these derived groups captures a relevant*

relationship between and/or among concept nodes in the corresponding primary groups;

Paragraph 0061, i.e., *In one example, the primary groups can be conceptualized as*

vectors and each derived group can be conceptualized as a translation matrix between

two primary group vectors, as illustrated in the drawing of FIG. 6. In this example, the

individual elements within the translation matrix capture relationships between

corresponding concept nodes of the primary groups. In one example, the individual

*translation matrix elements are binary valued (**e.g., a "1" if the activity and object are***

related, and a "0" if no relevant relationship exists between the activity and

***object**). In another example, the individual matrix elements each take on a particular*

value (e.g., integer, float, etc.) indicating a strength assigned to the relationship. In a

further example, the individual matrix element values are normalized to a reference

value).

As per claim 38 Wood in view of Copperman teaches the limitation:

"wherein the relationship comprise one of "is a product of", "is a part of", or "has part"

(Wood, Column 5 Lines 37-44, i.e. *This operation also makes use of a semantic*

network of semantic entailment relationships 150 composed of a general purpose

*entailments database 160 of semantic entailment relationships (i.e., **relationships***

between a term or concept and other terms or concepts that entail or imply that

***term**) that hold between general words and concepts of English and/or some other*

natural language; Column 8 Lines 18-20, i.e., *Thus, "**bird**" entails "**animal**" and*

*"**plumage**" entails "**bird**";* Copperman, Paragraph 0054, i.e., *Because concept nodes*

*may as evidence several **synonyms**, the retrieved documents in play may not include*

the exact user query terms, but may instead include synonyms to such user query

terms; Copperman, Paragraph 0055, i.e., *The guided search terms present concepts*

that are related to the concepts in play; Copperman Paragraph 0057, i.e., *To further*

illustrate the above example, for a CRM content provider for guiding a customer of a

software package to appropriate documentation about its use, concept nodes A1, A2, . .

*. , AN correspond to relevant activities (e.g., "**backup**," "**install**," etc.), concept nodes*

O1, O2, . . . , ON correspond to those relevant objects that aren't more specifically

*identified as products (e.g., "**laser printer**," "**server**," etc.), concept nodes S1, S2, . . . ,*

*SN correspond to relevant symptoms (e.g., "**crash**," "**error**," etc.), and concept nodes*

P1, P2, . . . , PN correspond to products (which may include goods and/or services,

e.g., "WordPerfect," "Excel," etc.)).

As per claim 39, Copperman teaches the limitation:

"wherein the origin concept comprises at least one search term" (Copperman,

Paragraph 0132, i.e., *"network"* is both a search term and a origin concept).

Claim 42 is rejected on the same basis as claim 32.

Claim 43 is rejected on the same basis as claim 38.

Claim 44 is rejected on the same basis as claim 39.

7.   Claim 5, 6, 19, 20, 30, and 31 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Woods in view of Copperman and further in view of Talib et al.

(hereinafter "Talib") (U.S. Patent Application Publication Number 2001/0049674).

Referring claims 5, Woods in view of Copperman does not explicitly teach the

limitation: "wherein the target rules further comprise a target score formula for

determining the target score".

Talib teaches the limitation: "wherein the target rules further comprise a target

score formula for determining the target score" (Paragraphs 0170-0171).

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to add the feature of employing a target score formula as taught

by Talib to the method of Woods in view of Copperman so that, in the resultant method,

the target rules would further comprise a target definition and a target score formula.

One would have been motivated to do so in order to *provide users with a multiple-*

taxonomy, multiple category search engine that allows users to search for records

(Talib, Paragraph 0043).

Referring to claim 6, Talib teaches the limitation:

"wherein applying the target rules comprises, using the target score formula to detect target hits" (Talib, Paragraph 0043).

Claims 19 and 20 are rejected on the same basis as claims 5 and 6 respectively.

As per claim 30, Woods in view of Copperman teaches the limitations:

"receiving a definition of target rule for detection of one or more target hits in an article, wherein the target rule definition comprises a definition of a target article region, a comparison method, and a target definition comprising at least one of a concept, a concept set, or a gist" (Woods, Column 4 Lines 47-38, i.e., *windows onto a target document – i.e., regions in a document* and Column 5 Lines 7-14; Copperman, Paragraph 0132, i.e., *concepts and concept nodes*; Note that comparison method is described in both Woods and Copperman), "a relationship between at least one concept, concept set, or gist and an evaluated term, and a distance representing a strength of the relationship" (Copperman, Paragraph 0132, Figure 2, Paragraphs 0037-0038, Figure 6, and Paragraph 0061 as cited above in claim 1),

"receiving a definition of an extraction rule for the extraction of one or more extracts from the article, wherein the extraction rule comprises a definition of an extraction article region and a description of the target rule definition, wherein the target rule relates to the extraction rule" (Woods, Column 5 Line 66 through Column 7 Line 57, i.e. *Basic Method: Ranking and Penalty Procedures, Procedure 1, Procedure 2,*

Procedure 2, Procedure 3, Procedure 4, Procedure 5, Procedure 6, Procedure 7,

Procedure 8, Procedure 9, and so on.);

Woods in view of Talib teaches the limitation:

"applying target rule to a collection of article regions of the article to determine a

target score for the article region" (Woods, Column 5 Line 66 through Column 7 Line 57;

Talib, Paragraph 0043); and

"applying the extraction rule to identify at least one extract from the article based

at least in part on the target scores for the article regions"(Woods, Column 5 Line 66

through Column 7 Line 57; Talib, Paragraph 0043).

As per claim 31, Woods teaches the limitation:

"applying the extraction rule comprises determining a plurality of extracts; and

the method further comprises ranking the extracts" (Abstract, i.e., *ranking ports of text*

that may contain information sought).

8.   Claim 7, 10, 11, 14, 21, 24, 25, and 28 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Woods in view of Copperman and further in view of Fernley et

al. (hereinafter "Fernley")(U.S. Patent Application Publication Number 2002/0174101).

Referring to claim 7, Woods in view of Copperman does not explicitly disclose

the limitation: "comprises a gist defined as a vector of weighted concepts."

Fernley teaches the limitation "a gist defined as a vector of weighted concepts"

(Fernley, Paragraph 101, i.e., *The new summarizing method provides a phrase*

*signature comprising **an ordered set of weighted keywords** representing the `average of the phrases contained within the document`. It is believed that this method provides for each document, an indication of the major scope or ` **gist**` of its contents;* Note that weighted keywords are weighted concepts; Also note Figure 1 of Fernley and Paragraphs 102-0106, a method for obtaining vectors of weighted concepts is described step by step).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of generating a gist of a document as taught by Fernley to the method of Woods in view of Copperman so that, in the resultant method, the target definition comprises a concept set or a gist or both. One would have been motivated to do so in order to *provide a sufficiently specific method of document retrieval, particularly when applied to a set of large documents with broad semantic content* (Fernley, Paragraph 0012).

Referring to claim 10, Fernley teaches the limitation:

"wherein the gist comprises a user-defined gist" (Fernley, Paragraphs 0100-0104). Note that in neural network learning rules, user feedback/input is always present. Therefore, Fernley's gist is user-defined.

Referring to claim 11, Wood in view of Copperman and further in view of Fernley is directed to the limitation:

"wherein the gist comprises a calculated gist of a document region" (Fernley,

Paragraphs 0100-0104 and Paragraph 0011. Note that in neural network learning rules,

user feedback/input is always present and Fernley's gist is calculated using neural

network methods. Wood teaches extracting document regions. Therefore, Wood in view

Fernley teaches a calculated gist of a document region.

Referring to claim 14, Fernley is directed to the limitation:

"preprocessing the article, wherein preprocessing comprises:

"determining at least one concept associated with the article and determining a

gist of the article" (Fernley, Paragraphs 0100-0104 and Paragraph 0011).

Claim 21 is rejected on the same basis as claim 7.

Claims 24-25 are rejected on the same basis as claims 10-11 respectively.

Claim 28 is rejected on the same basis as claim 14.

9.   Claim 9, 23, 40, 41, 45, 46, 47, and 48 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Woods in view of Copperman and further in view of Sacco

(hereinafter "Sacco") (U.S. Patent Number 6763349).

Referring to claim 9, Woods in view of Copperman teaches the limitation "a

second concept" (as cited Wood in claim 8 above) but Woods in view of Copperman

and further in view of Fernley does not explicitly disclose the limitation: "wherein the

second concept comprises a product of set operations on two or more other concepts."

On the other hand, Sacco teaches the limitation:

"wherein the second concept comprises a product of set operations on two or more other concepts" (Sacco, Column 2 Lines 5-8 and Column 8, Lines 15 through Column 3 Line 32).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of using set operations on concepts, as taught by Sacco, to the method of Woods in view of Copperman so that, in the resultant method, the second concept would be the product of set operations on two or more concepts. One would have been motivated to do so in order to obtain *reduced taxonomy, which derived from the original taxonomy by pruning the concepts* (Sacco, Column 2 Lines 5-8).

Claim 23 is rejected on the same basis as claim 9.

As per claim 40, Wood in view of Copperman and further in view Sacco teaches the limitation:

"wherein the concept set further comprises at least one set operation" (Sacco, Column 2 Lines 5-8 and Column 8, Lines 15 through Column 3 Line 32).

As per claim 41, Wood in view of Copperman and further in view of Sacco teaches the limitation:

"wherein the set operation comprises one of "AND", "OR", and "NOT". (Sacco, Column 8 Lines 25-35)

Claim 45 is rejected on the same basis as claim 40.

Claim 46 is rejected on the same basis as claim 41.

As per claim 47, Wood in view of Copperman and further in view Sacco teaches the limitations:

"receiving information describing two more concepts" (Wood in view of Copperman as applied to claim 1 and 8 above. Wood in view of Copperman receives information describes two or more concepts) "wherein a concept defined through a collection of related words" (Wood, Column 5 Lines 37-44, i.e. *This operation also makes use of a semantic network of semantic entailment relationships 150 composed of a general purpose entailments database 160 of semantic entailment relationships (i.e., relationships between a term or concept and other terms or concepts that entail or imply that term) that hold between general words and concepts of English and/or some other natural language;* Column 8 Lines 18-20, i.e., *Thus, "bird" entails "animal" and "plumage" entails "bird";* Copperman, Paragraph 0054, i.e., *Because concept nodes may as evidence several synonyms, the retrieved documents in play may not include the exact user query terms, but may instead include synonyms to such user query terms;* Copperman, Paragraph 0055, i.e., *The guided search terms present concepts that are related to the concepts in play;* Copperman Paragraph 0057, i.e., To*

further illustrate the above example, for a CRM content provider for guiding a customer

of a software package to appropriate documentation about its use, concept nodes A1,

A2, . . . , AN correspond to relevant activities (e.g., "backup," "install," etc.), concept

nodes O1, O2, . . . , ON correspond to those relevant objects that aren't more

specifically identified as products (e.g., "laser printer," "server," etc.), concept nodes

S1, S2, . . . , SN correspond to relevant symptoms (e.g., "crash," "error," etc.), and

concept nodes P1, P2, . . . , PN correspond to products (which may include goods

and/or services, e.g., "WordPerfect," "Excel," etc.);

"combining two or more concepts using an operation" (Sacco, Column 2 Lines 5-

8 and Column 8, Lines 15 through Column 3 Line 32) "to define a target definition that

is to be detected" (Wood, Column 4 Lines 47-38, Column 5 Line 66 through Column 7

Line 57);

"receiving a description of a document region targeted for extraction" (Wood,

Column 4 Lines 47-38);

"assessing a document" (Wood, Figure 4);

"based on the target definition and the document regions targeted for extraction"

(Wood, Column 4 Lines 47-38, Column 5 Lines 7-14, Column 5 Line 66 through Column

7 Line 57) "extracting one or more regions of the accessed document ; and making the

extracted regions available for output" (Wood Figure 4).

As per claim 48 Wood in view of Copperman and further in view of Sacco

teaches the limitation:

"wherein the concepts each comprises a lexical concept defined a by a group of related words and relationships with related concepts" (Wood in view of Copperman as applied to claim 1 and 8 above. Wood in view of Copperman receives information describes two or more concepts) "wherein a concept defined through a collection of related words" (Wood, Column 5 Lines 37-44, i.e. *This operation also makes use of a semantic network of semantic entailment relationships 150 composed of a general purpose entailments database 160 of semantic entailment relationships (i.e., **relationships between a term or concept and other terms or concepts that entail or imply that term**) that hold between general words and concepts of English and/or some other natural language;* Column 8 Lines 18-20, i.e., *Thus, "**bird**" entails "**animal**" and "**plumage**" entails "**bird**";* Copperman, Paragraph 0054, i.e., *Because concept nodes may as evidence several **synonyms**, the retrieved documents in play may not include the exact user query terms, but may instead include synonyms to such user query terms;* Copperman, Paragraph 0055, i.e., *The guided search terms present concepts that are related to the concepts in play;* Copperman Paragraph 0057, i.e., *To further illustrate the above example, for a CRM content provider for guiding a customer of a software package to appropriate documentation about its use, concept nodes A1, A2, . . . , AN correspond to relevant activities (e.g., "**backup**," "**install**," etc.), concept nodes O1, O2, . . . , ON correspond to those relevant objects that aren't more specifically identified as products (e.g., "**laser printer**," "**server**," etc.), concept nodes S1, S2, . . . , SN correspond to relevant symptoms (e.g., "**crash**," "**error**," etc.), and*

concept nodes P1, P2, . . . , PN correspond to products (which may include goods

and/or services, e.g., "WordPerfect," "Excel," etc.).

10.   Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods

in view of Copperman and further in view of Ukrainczyk et al. (hereinafter Ukrainczyk)

(U.S. Patent Application Publication Number 2002/0022956).

As per claim 29, Woods in view of Maruyama does not explicitly teach the

limitation: "wherein the origin concept further comprises a group of related words,

relationships with other concepts, the strengths of the relationships, and statistics

regarding the usage of the origin concept in a language".

Ukrainczyk teaches the limitation:

"wherein the origin concept further comprises a group of related words,

relationships with other concepts, the strengths of the relationships, and statistics

regarding the usage of the origin concept in a language" (Paragraphs 0030, i.e., *The*

matrix values are attributes of the relationship between features and concepts, including

feature frequency data determined by calculating the number of times the feature

occurred in documents tagged to that concept node (count), and assigning a value

representative of the strength of association between the feature and the concept

(weight)). Note that said features are also concepts.

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to add the feature of employing a group of related words,

relationships with other concepts, the strength of the relationships, and statistics about

the concept usage in a language, as taught by Ukrainczyk in the art of document

extraction and classification, to the method of Woods in view of Copperman so that in

the resultant method the concept will be defined by a group of related words,

relationships with other concepts, the strength of the relationships, and statistics about

the concept usage in language. One would have been motivated to do so in order to

provide *an effective method for classifying text* using *a statistical model* and also

because frequency of terms, relationship among/between terms and strength of said

relationships are commonly used in the art of document classification, document

extraction and document clustering.

11.   Claim 32 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods

in view of Copperman and further in view of Talib and further in view of Fernley et al.

(hereinafter "Fernley")(U.S. Patent Application Publication Number 2002/0174101).

    As per claim 32, Woods in view of Copperman further in view of Talib does not

explicitly teach the limitation: "wherein the gist comprises a vector of weighted

concepts".

    Fernley teaches the limitation:

    "wherein the gist is a vector of weighted concepts" (Paragraph 0007, i.e., *a vector*

of terms with associated weights; and Paragraph 0101, i.e., *It is believed that this*

method provides for each document, an indication of the major concepts or 'gist' of its

contents).

At the time the invention was made, it would have been obvious to a person of

ordinary skill in the art to add the feature of generating a gist (vector of terms) of a

document as taught by Fernley to the method of Woods in view of Copperman and

further in view of Talib so that, in the resultant method, the target definition comprises a

concept set or a gist or both. One would have been motivated to do so in order to

provide a sufficiently specific method of document retrieval, particularly when applied to

a set of large documents with broad semantic content (Fernley, Paragraph 0012).

12.   Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods

in view of Copperman and further in view of Talib and further in view of Ukrainczyk et al.

(hereinafter Ukrainczyk) (U.S. Patent Application Publication Number 2002/0022956).

As per claim 29, Woods in view of Maruyama and further in view of Talib does

not explicitly teach the limitation: "wherein the concept is defined by a group of related

words, relationships with other concepts, the strength of the relationships, and statistics

about the concept usage in a language".

Ukrainczyk teaches the limitation:

"wherein the concept is defined by a group of related words, relationships with

other concepts, the strength of the relationships, and statistics about the concept usage

in language" (Paragraphs 0030, i.e., *The matrix values are attributes of the relationship*

between features and concepts, including feature frequency data determined by

calculating the number of times the feature occurred in documents tagged to that

concept node (count), and assigning a value representative of the strength of

association between the feature and the concept (weight)). Note that said features are also concepts.

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of employing a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language, as taught by Ukrainczyk in the art of document extraction and classification, to the method of Woods in view of Copperman and further in view of Talib so that in the resultant method the concept will be defined by a group of related words, relationships with other concepts, the strength of the relationships, and statistics about the concept usage in language. One would have been motivated to do so in order to provide *an effective method for classifying text* using *a statistical model* and also because frequency of terms, relationship among/between terms and strength of said relationships are commonly used in the art of document classification, document extraction and document clustering.

13.   Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Woods in view of Copperman and further in view of Talib and further in view of Takada et al. (hereinafter Takada) (U.S. Patent Number 5796913).

As per claim 34, Woods in view of Copperman and further in view of Talib inherently teaches comparison methods. However, Woods in view of Copperman and further in view of Talib dose not explicitly disclose the limitation: "wherein the comparison method comprises one of an   associated categorization-like method, an

inverse categorization-like method, a similarity to gist method, or a concept set hit method".
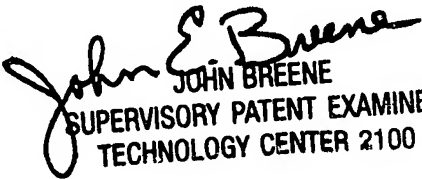
Takada teaches the limitation:

"wherein the comparison method comprises one of an associated categorization-like method, an inverse categorization-like method, a similarity to gist method, or a concept set hit method" (Column 6 Line 59 through Column 7 Line 9, i.e., *The plural chapters are classified into several image genres corresponding to several content or gist, into which a plurality of karaoke songs are categorized. For example, the plural chapters are classified into image genre appropriate for songs with summer seasonal theme, image genre appropriate for songs with winter seasonal theme, and image genre appropriate for songs with spring or fall seasonal theme*).

At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to add the feature of employing gist in categorization, which will be used for searching, as taught by Takada to the method of Woods in view of Copperman and further in view of Talib so that the resultant method would comprise a comparison associated categorization-like method. One would have been motivated to do so because comparison methods, which compare based on categorization or categories, are well known in the art.

Contact Information

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Dennis Myint whose telephone number is (571) 272-

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If attempts to reach the examiner by telephone.are unsuccessful, the examiner's

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the organization where this application or proceeding is assigned is 571-273-5629.

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